

REMARKS

Unrelated to patentability, the applicants have voluntarily amended the specification to correct a reference number.

Regarding the claims, claims 1-10 and 17-32 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Barna et al. (U.S. Patent Application Publication Number 2002/0046277, hereinafter "Barna"), claims 11-16 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Barna in view of Applicant Admitted Prior Art, and claims 1, 17, 27 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Barna in view of Madour (U.S. Patent Application Publication Number 2002/0021681). Respectfully disagreeing with these rejections but nonetheless amending the claims, the applicants request reconsideration of the outstanding rejections. However, no amendment made was related to the statutory requirements of patentability unless expressly stated herein; and no amendment made was for the purpose of narrowing the scope of any claim.

As amended claims 1 and 27 recite that conveying the PPP context information comprises conveying only types of PPP context information **that are applicable to the target AR**. The Examiner has asserted (with respect to original claim 7) that this language is taught by Barna [0035]-[0036], which reads as follows (emphasis added):

[0035] The prior art conventionally sets up an A10 connection following an access specific layer 2 handoff (CDMA 2000, 3GPP2/IS2001 Specifications). This contributes a significant delay. To address this concern, and hence reduce the delay level, a proposed fast handoff procedure sets up the A10 connection earlier in the handoff process and preferably before the issuance of the handoff command from the old (serving) PDSN. More particularly, the pre-setup of the A10 connection is accomplished after the target Base Station Controller (BSC) responds to the PDSN handoff request with an A9-Setup-A8 message. Pre-setup of the A10 connection provides the new (target) PDSN with the address of the old PDSN. The new PDSN then makes a handoff solicitation to the old PDSN. Responsive thereto, the old PDSN provides **all the security, mobility, and PPP context information relating to the subscriber**.

[0036] **Transfer of the PPP context information obviates the need to renegotiate the PPP link** at the new PDSN following handoff and minimizes delay of link layer

establishment. The address of the new PDSN is provided to the old PDSN in connection with the A9-AL disconnect to stop packet transmission to the old BSC in the radio access network, and this address is used to establish a path to tunnel the packets to the new PDSN. Following mobile station handoff, an A9-AL connect message is provided to trigger the resumption of packet data transmission using the PDSN-to- PDSN tunnel.

However, the applicants submit that this portion of Barna actually teaches away from what is claimed. Barna clearly teaches that all the PPP context information relating to the subscriber is conveyed. Claims 1 and 27 recite that conveying the PPP context information comprises conveying only the types of PPP context information that are **applicable to the target AR**. Thus, the information's applicability to the target AR is the qualifier for what is transferred.

Barna teaches transferring it all for that subscriber. This goes against what is claimed, particularly since Barna then touts that this practice "obviates the need to renegotiate the PPP link." In contrast to Barna, the present application recognizes that some of the PPP context information may not be applicable to the target AR and thus require a partial renegotiation of PPP parameters with the remote unit.

Claim 8 recites **requesting**, by the source AR, **target AR capabilities** from the target AR. Claim 9 recites sending, by the source AR, an **indication of which types of context information are being conveyed**. Claim 10 recites maintaining, by the source AR, a record of the **target AR's capabilities**. The Examiner has asserted that this language is taught by Barna [0034]-[0036], which reads as follows:

[0034] During a handoff of a Prepaid mobile subscriber, it is important that the balance of volume remaining in the Prepaid subscriber's account continue to be accurately monitored and reported. This is especially a concern when the handoff is an inter-PDSN handoff. In this situation, a tunnel is established to connect the two implicated PDSNs for the carrying of packets during the handoff procedure. It is possible that packets may be communicated by the old PDSN through the tunnel after the accounting session is terminated in the old PDSN but before the accounting session in the new PDSN is established. In order to ensure accuracy of the Prepaid account balance, this volume of tunneled data must be monitored and reported.

[0035] The prior art conventionally sets up an A10 connection following an access specific layer 2 handoff (CDMA 2000, 3GPP2/IS2001 Specifications). This contributes a significant delay. To address this concern, and hence reduce the delay level, a proposed fast handoff procedure sets up the A10 connection earlier in the handoff process and preferably before the issuance of the handoff command from the old (serving) PDSN.

More particularly, the pre-setup of the A10 connection is accomplished after the target Base Station Controller (BSC) responds to the PDSN handoff request with an A9-Setup-A8 message. Pre-setup of the A10 connection provides the new (target) PDSN with the address of the old PDSN. The new PDSN then makes a handoff solicitation to the old PDSN. Responsive thereto, the old PDSN provides all the security, mobility, and PPP context information relating to the subscriber.

[0036] Transfer of the PPP context information obviates the need to renegotiate the PPP link at the new PDSN following handoff and minimizes delay of link layer establishment. The address of the new PDSN is provided to the old PDSN in connection with the A9-AL disconnect to stop packet transmission to the old BSC in the radio access network, and this address is used to establish a path to tunnel the packets to the new PDSN. Following mobile station handoff, an A9-AL connect message is provided to trigger the resumption of packet data transmission using the PDSN-to- PDSN tunnel.

However, the applicants fail to see how this portion of Barna teaches or suggests language taught by either claim 8, 9 or 10. Therefore, the applicants submit that Barna does not teach what is claimed.

As amended claims 17 and 29 recite **sending**, by the target AR, **capabilities of the target AR** to the source AR. The Examiner has asserted (with respect to original claim 20) that this language is taught by Barna [0034]-[0035], which reads as follows:

[0034] During a handoff of a Prepaid mobile subscriber, it is important that the balance of volume remaining in the Prepaid subscriber's account continue to be accurately monitored and reported. This is especially a concern when the handoff is an inter-PDSN handoff. In this situation, a tunnel is established to connect the two implicated PDSNs for the carrying of packets during the handoff procedure. It is possible that packets may be communicated by the old PDSN through the tunnel after the accounting session is terminated in the old PDSN but before the accounting session in the new PDSN is established. In order to ensure accuracy of the Prepaid account balance, this volume of tunneled data must be monitored and reported.

[0035] The prior art conventionally sets up an A10 connection following an access specific layer 2 handoff (CDMA 2000, 3GPP2/IS2001 Specifications). This contributes a significant delay. To address this concern, and hence reduce the delay level, a proposed fast handoff procedure sets up the A10 connection earlier in the handoff process and preferably before the issuance of the handoff command from the old (serving) PDSN. More particularly, the pre-setup of the A10 connection is accomplished after the target Base Station Controller (BSC) responds to the PDSN handoff request with an A9-Setup-A8 message. Pre-setup of the A10 connection provides the new (target) PDSN with the address of the old PDSN. The new PDSN then makes a handoff solicitation to the old PDSN. Responsive thereto, the old PDSN provides all the security, mobility, and PPP

context information relating to the subscriber.

However, the applicants fail to see how this portion of Barna teaches or suggests the sending of capabilities of the target AR at all. Therefore, the applicants submit that Barna does not teach what is claimed.

Claim 18 recites negotiating, by the target AR with the remote unit, PPP parameters not received by the target AR from the source AR. Claim 19 recites determining that at least a portion of the PPP context information is not applicable to the target AR and negotiating, by the target AR with the remote unit, PPP parameters corresponding to the PPP context information determined to not be applicable to the target AR. The Examiner has asserted that this language is taught by Barna [0040]-[0043], which reads as follows:

[0040] At the beginning of FIG. 2, the MS 11 is engaged in a packet data session via the Internet 13. A connection 67 is established between the MS, the Source PCF 62, and the Source PDSN- 1 63. At 68, it is determined that an inter-PDSN handoff is required because, for example, the MS moves from the service area of PDSN- 1 into the service area of the Target PDSN-2 66. The Target PCF 65 then sends an All Registration Request message 69 to PDSN-2. At 71, a handoff solicitation is initiated by PDSN-2 toward PDSN- 1 which results in the establishment of a Point-to-Point Protocol (PPP) connection at 72. PDSN-2 then sends an All Registration Reply 73 to the Target PCF. At this point, the connection 67 between the MS, the Source PCF, and PDSN-1 is enhanced by delivering data to both the Source PCF and the Target PCF. As shown at 74, a connection is established between PDSN-1 and PDSN-2, and at 75, a connection is established between PDSN-2 and the Target PCF.

[0041] At successful completion of the handoff, the Target PCF 65 indicates this to the Target PDSN-2 66 in an All Registration Request message 76. The Target PDSN-2, in turn, forwards this indication at 77 to the Source PDSN-1 63. While PDSN-1 retains the connection to the Internet at 78, data is delivered to the MS 11 via the PP connection 79 between PDSN-1 and PDSN-2, via the connection 81 between PDSN-2 and the Target PCF 65, and via the connection 82 between the Target PCF and the MS.

[0042] An Accounting Request Stop message 83 is then sent from the Source PDSN-1 63 to the AAA Server 14. At 84, the AAA Server forwards the Accounting Request Stop message to the PPS 15 where it is indicated at step 85 that the session has terminated in PDSN-1. At 86, the PPS sends an Accounting Response message to the AAA Server which forwards the Accounting Response message to PDSN-1 at 87.

[0043] At step 88, the session goes dormant. The PP connection between PDSN-1 and

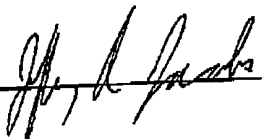
PDSN-2 is released by sending a PP Release Request message 89 from PDSN-2 to PDSN-1. At 91, a PP Release Request Reply message is sent from PDSN-1 to PDSN-2 with accounting information relating to the volume of data transferred over the PP connection during the handoff procedure (i.e., mobility volume). The Target PCF 65 then sends an All Registration Request message 92 to PDSN-2, and PDSN-2 sends an Access Request message 93 to the AAA Server. PDSN-2 thus becomes the serving PDSN. At 94, the AAA Server 14 performs an authentication of the MS. Upon positively authenticating the MS, the AAA Server forwards the Access Request message at 95 to the PPS 15. The PPS performs an authorization process at 96, determining the Prepaid attributes for the Prepaid subscriber. The Prepaid attributes are then returned to the AAA Server in an Access Accept message 97. At 98, the AAA Server then sends an Access Accept message to PDSN-2, and includes the Prepaid attributes. As described above, the attributes may include a first attribute indicating the maximum volume of data permitted for the user (Max. Volume "V"), and a second attribute indicating a threshold volume (Min. Volume "v") that signifies a trigger point for the sending of an Accounting Stop message.

However, the applicants fail to see how this portion of Barna teaches or suggests language taught by either claim 18 or 19. Therefore, the applicants submit that Barna does not teach what is claimed.

Since none of the references cited, either independently or in combination, teach all of the limitations of independent claims 1, 17, 27 or 29, or therefore, all the limitations of their respective dependent claims, it is asserted that neither anticipation nor a prima facie case for obviousness has been shown. No remaining grounds for rejection or objection being given, the claims in their present form are asserted to be patentable over the prior art of record and in condition for allowance. Therefore, allowance and issuance of this case is earnestly solicited.

The Examiner is invited to contact the undersigned, if such communication would advance the prosecution of the present application. Lastly, please charge any additional fees (including extension of time fees) or credit overpayment to Deposit Account No. 502117 -- Motorola, Inc.

Respectfully submitted,
M. Nakhjiri et al.

By: 

Jeffrey K. Jacobs
Attorney for Applicant(s)
Registration No. 44,798
Phone No.: 847/576-5562
Fax No.: 847/576-3750